

REMARKS:

Status Of Claims

Claims 1-19 and 26-37 were previously pending. Claim 14 has been amended. Thus, claims 1-19 and 26-37 are currently pending in the application with claims 1 and 26 being independent.

Office Action

Applicant would like to thank the Examiner for indicating that claims 26-37 have been allowed.

In the Office Action, the Examiner rejected claim 3-5 and 10-19 under 35 U.S.C. § 112, second paragraph, as being indefinite. With regard to "aircraft on an aircraft flight path", claim 3 actually recites "wherein searching comprises comparing a value stored in the memory cell with a predetermined search criteria dependant upon a vertical velocity of **an** aircraft on an aircraft flight path", emphasis added. Thus, claim 3 further refines the searching step of claim 1.

With regard to "aircraft flight path", claim 10 actually recites "wherein identifying a search vector through the spatial region comprises identifying **an** aircraft flight path through a geographic region, and storing data relative to elevation values for a portion of the geographic region in the memory cells", emphasis added. Thus, claim 10 further refines the identifying step of claim 1.

With regard to "aircraft altitude", claim 11 actually recites "wherein searching comprises comparing the data relative to an elevation value stored in a memory cell with **a** projected **aircraft** safety **altitude** for the memory cell", emphasis added. Thus, claim 11 further refines the searching step of claim 1 using "the data" of claim 10.

Claim 19 recites "further comprising determining **a** terrain alert and displaying images on **a** terrain display, the images representative of terrain and **an** associated terrain alert level". Thus, claim 19 adds a further step.

As explained in the specification, one of the possible applications for the claimed method is "searching terrain elevation data for a geographic area to determine aircraft terrain clearance". Page 1, Lines 21-22. Thus, these claims add limitations to the method claimed in claim 1 that are more focused on its possible use in aircraft, such as for terrain avoidance purposes.

With regard to asserted lack of antecedent basis rejections, Applicant notes that each word or phrase is first preceded by "a", "an", or no article at all. Applicant believes this to be proper practice. The words or phrases themselves are used in and/or otherwise supported by the specification. Applicant believes these to be normal usage of the above terms. While correction does not appear to be required, Applicant is more than willing to entertain whatever suggestions the Examiner might have and the Examiner is encouraged to contact the undersigned to discuss the matter further.

Claim 14 has been amended to overcome the only antecedent basis problem found by Applicant.

The Examiner also rejected claims 1-5, 8, and 10-19 under 35 U.S.C. § 102(e) as being anticipated by Riemens et al., U.S. Patent Application No. 20030063673. Applicant respectfully submits that the currently pending claims distinguish the present invention from Riemens and the other prior art references of record, taken alone or in combination with each other.

Anticipation

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP § 2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). More specifically, "Federal Circuit decisions repeatedly emphasize that anticipation (lack of novelty) is established only if (1) all the elements of an invention, as stated in a patent claim, (2) are identically set forth, (3) in a single prior art reference". Chisum on Patents § 3.02. See also *Gechter v. Davidson*, 43 USPQ2d 1030, 1032 (Fed. Cir. 1997) ("Under 35 U.S.C. § 102, every limitation of a claim must identically appear in a single prior art reference for it to anticipate the claim.").

Claim 1 recites "searching a portion of the memory buffer cells in a predetermined prioritized order".

In contrast, Riemens fails to speak of any "predetermined prioritized order". In fact, Riemens does not even include any variation of the terms "predetermined" or "prioritized". Rather, as Riemens himself admits, "[d]etails of the searching process [are] not explained here". ¶ 22. As the Examiner has failed to cite references that teach each and every claim

limitation, the Examiner has failed to properly establish a *prima facie* case of anticipation, and therefore the present rejections cannot be sustained.

Furthermore, the Examiner fails to even address the limitations of claims 2-5, 8, or 10-19. For example, claim 2 recites "wherein searching comprises searching the memory buffer cells in a non-linear prioritized order". Claim 3 recites "wherein searching comprises comparing a value stored in the memory cell with a predetermined search criteria dependant upon a vertical velocity of an **aircraft** on an **aircraft flight path**", emphasis added. Claim 10 recites "wherein identifying a search vector through the spatial region comprises identifying an **aircraft flight path** through a geographic region, and storing data relative to elevation values for a portion of the geographic region in the memory cells", emphasis added. Specifically, the Examiner fails to even assert that Riemans teaches any "non-linear prioritized order" or is even applicable to any aircraft applications. In fact, Riemans is completely devoid of any reference to any "aircraft" at all and does not include any variation of the term. As the Examiner has failed to cite references that teach each and every claim limitation, the Examiner has failed to properly establish a *prima facie* case of anticipation, and therefore the present rejections cannot be sustained.

Furthermore, Riemans appears to be non-analogous art. The applicable test for determining whether a prior art reference is properly analogous involves:

(1) whether the art is from the same field of endeavor, regardless of the problem addressed, and (2) if the reference is not within the same field of the inventor's endeavor, whether the reference still is reasonably pertinent to

the particular problem with which the inventor is involved. *In re Clay*, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992).

Riemans teaches a method of "[e]stimating and/or compensating for motion in a video image". Abstract. The present invention, on the other hand, teaches "spatial data search method" which may be used in "searching geographic data for a terrain awareness and warning system ("TAWS") and display in an aircraft". Abstract. Therefore, Riemans and the present invention are clearly not "from the same field of endeavor".

"A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to the inventor's attention in considering his problem". *Id.* 1061. Patent examination, however, is necessarily conducted by hindsight, with complete knowledge and benefit of the applicant's invention as a guide. *In re Oetiker*, 24 USPQ2d 1443, 1447 (Fed. Cir. 1992). For this reason, it is necessary to consider the "reality of the circumstances" in deciding in which fields a person of ordinary skill in the art would reasonably be expected to look for the solution to the problem facing the inventor. *Id.* 1447. Ultimately, a rejection based on non-analogous art cannot be sustained. *Id.* 1061.

The test set forth in *In re Clay* was tellingly applied, for example, in *Wang Laboratories, Inc. v. Toshiba Corp.*, which is cited by and discussed in MPEP §2141.01(a) in the context of determining analogousness in the electrical arts. *Wang Laboratories, Inc. v. Toshiba Corp.*, 26 USPQ2d 1767 (Fed. Cir. 1993). Wang Laboratories, Inc. (hereinafter

referred to as "Wang"), as assignee, brought suit against a number of parties, including Toshiba Corp. and NEC Corp., for infringement of U.S. Patent Nos. 4,656,605 (the "'605 patent") and 4,727,513 (the "'513 patent"). *Id.* 1070. These patents relate to and claim certain types of single in-line memory modules (SIMMs) (the "Wang SIMMs"). *Id.* 1770. At trial, a jury found that SIMMs manufactured by Toshiba Corp. and NEC Corp. infringed certain claims of the '605 and '513 patents. *Id.* 1770. In relevant part, Toshiba Corp. and NEC Corp. moved for JNOV, which was denied, and thereafter appealed. *Id.* 1770.

On appeal, Toshiba Corp. and NEC Corp. argued that the claims at issue were invalid for obviousness under 35 U.S.C. §103 in light of U.S. Patent No. 4,281,392 to Allen-Bradley Co. and its commercial counterpart the X9 SIMM (the "Allen-Bradley SIMM"). *Id.* 1772. Toshiba Corp. and NEC Corp. argued that the Allen-Bradley patent and the Allen-Bradley SIMM were analogous to the claimed subject matter and effective to render the relevant claims of the '605 and '513 patents invalid. *Id.* 1772.

The court held that an adequate jury instruction regarding analogous art had been provided at trial, and held that the jury's finding of non-analogous art was supported by substantial evidence. *Id.* 1773. Specifically, the court cited the criteria set forth in *In re Clay*, and noted that "[t]he Allen-Bradley art is not in the same field of endeavor as the claimed subject matter merely because it relates to memories ... [Allen-Bradley] involves memory circuits in which modules of varying sizes may be added or replaced; in contrast, the subject patents teach compact modular memories". *Id.* 1773. In finding substantial evidence to support the jury's finding, the court noted that the Wang SIMMs were pertinent

to the field of personal computers, and were designed to provide compact computer memory with minimum size, low cost, easy reparability, and easy expandability. *Id.* 1773. Contrastingly, the Allen-Bradley SIMMs were developed for use in a controller of much larger industrial machinery and could not be used in a personal computer. *Id.* 1773. Thus, while the Wang SIMMs were purposefully designed to be small, size was not a consideration for the Allen-Bradley SIMMs. *Id.* 1773. For these reasons, the court held, the Allen-Bradley prior art was non-analogous and not reasonably pertinent to the '605 and '513 patents. *Id.* 1773.

The test set forth in *In re Clay* was also tellingly applied, for example, in *In re Oetiker*, which is cited by and discussed in MPEP §2141.01(a) in the context of determining analogousness in the mechanical arts. *In re Oetiker*, 24 USPQ2d 1443 (Fed. Cir. 1992). In *In re Oetiker*, an improvement was claimed to a stepless, earless metal clamp, with the improvement being a preassembly hook which serves to both maintain a preassembly condition of the clamp and to disengage automatically when the clamp is tightened. *Id.* 1445. All claims were rejected over the combination of U.S. Patent No. 4,492,004 to Oetiker, which disclosed the unimproved clamp, and U.S. Patent No. 3,426,400 to Lauro, which disclosed a plastic hook and eye fastener for use in garments. *Id.* 1445.

Oetiker argued during prosecution that Lauro's garment hook was non-analogous art in that a person of ordinary skill seeking to solve the problem facing Oetiker would not look to the garment art for the solution. *Id.* 1445. The Examiner argued that because

garments commonly use hooks for securement, a person faced with the problem of unreliable maintenance of the pre-assembly configuration of an assembly line metal hose clamp would look to the garment industry art. *Id.* 1445. On Appeal, the Board held that Lauro was analogous art because both Lauro's and the Oetiker's inventions relate to "a hooking problem". *Id.* 1445.

The court, however, disagreed, stating that it had not been shown that a person of ordinary skill seeking to solve the problem facing Oetiker would reasonably be expected or motivated to look to fasteners for garments. Furthermore:

The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge cannot come from the applicant's invention itself. *Id.* 1446.

In the present case, it seems unlikely that a person of ordinary skill seeking to solve some perceived problem in an spatial data, much less as applied to aircraft, would reasonably be expected or motivated to look to video motion estimation techniques. Thus, Riemens is simply non-analogous to the present invention, and is therefore simply not a proper reference with regard to the present invention.

The remaining claims all depend from claim 1, and are therefore also allowable. Any additional fee which is due in connection with this amendment should be applied

against our Deposit Account No. 501-791. In view of the foregoing, a Notice of Allowance appears to be in order and such is courteously solicited.

Respectfully submitted,

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